

## Ceramicrete Publications List

### Book

*Chemical Bonded Phosphate Ceramics*: Twenty-first century materials with diverse applications, by Arun S. Wagh, Elsevier (2004) 300p. ISBN: 0080445055

### Review articles

1. Ceramicrete — An alternative radioactive waste form, by Arun S. Wagh, in Stabilization and Solidification of Hazardous, Radioactive, and Mixed Wastes, R.D. Spence; CRC Press (2005), Boca Raton, Chapter 6.2, 118-129 pp. ISBN: 1566704448
2. Chemically bonded phosphate ceramics for stabilization and solidification of mixed wastes, by A.S. Wagh, D. Singh, S.Y. Jeong, in Hazardous, and Radioactive Waste Treatment Technologies Handbook, Chapter 6-3
3. Hazardous waste solidification and stabilization, by A. S. Wagh, H.S. Huang, in Encyclopedia of Environmental Analysis and Remediation, 8, R.A. Meyers (ed.), J. Wiley (1998), 2090-2102 pp.

### Research papers

1. Phosphate Geopolymers for Nuclear Waste Immobilization and Storage, and Structural Materials Applications, Arun S. Wagh, Advances in Inorganic Phosphate Materials, Illias Belharouak and Vilas Pol (ed.) Ceramic Transactions, vol. 233 (2012) 195-202 pp.
2. Magnesium potassium phosphate ceramic for  $^{99}\text{Tc}$  immobilization, D. Singh, V. R. Mandalika, S. J. Parulekar, and A. S. Wagh, J. Nuclear Materials, 348 [3] (2006) 272-282.
3. Stabilization and solidification of metal-laden wastes by compaction and magnesium phosphate-based binder, Anand J. Rao, Krishna R. Pagilla, Arun S. Wagh, Journal of the Air and Waste Management Association, 50 [9] September 2000, p 1623-1631.
4. Stabilization of Rocky Flats Pu-contaminated ash within chemically bonded phosphate ceramics, A. S. Wagh, R. Strain, S. Y. Jeong, D. Reed, T. Krause, D. Singh, Journal of Nuclear Materials, 265 [3] March 1, 1999, p 295-307.
5. Erosion of magnesium potassium phosphate ceramic waste forms, K. C. Goretta, D. Singh, D., A. Wagh, M. Tlustochowicz, M., M. M. Cuber, L. L. Burdt, S. Y. Jeong, T. L. Smith, Materials Research Society Symposium Proceedings, 556, 1999, p 1253-1260.
6. Phosphate ceramic process for macro-encapsulation and stabilization of low-level debris waste, D. Singh, A. S. Wagh, M. Tlustochowicz, Waste Management, 18 [2], 1998, p. 135-143.
7. Chemically bonded phosphate ceramics for low-level mixed-waste stabilization, Dileep Singh, Arun S. Wagh, James C. Cunnane, John L. Mayberry, Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 32 [2] 1997, p 527-541.
8. Investigations in ceramicrete stabilization of Hanford tank wastes, A. S. Wagh, M. D. Maloney, G. H. Thomson, and A. Antink, Proc. WM '03 Conf., Tuscon, Feb. 23-27, 2003.40. Mercury stabilization in chemically bonded phosphate ceramics, A. S. Wagh, D. Singh and S. Y. Jeong, Invited paper presented at EPA's Workshop on Mercury Products, Processes,

Waste, and the Environment: Eliminating, Reducing and Managing Risks, Baltimore, March 22-23, 2000.

9. Low-temperature synthesis of berlinitite-bonded alumina ceramics, S. E. Grover, S. Y. Jeong, A. S. Wagh, and T. R. West, Proc. 101st Annual Meeting of the American Ceramic Society, Indianapolis, April 25-28, 1999.
10. Phosphate ceramic solidification and stabilization of cesium-containing crystalline, silicotitanate resins, C. A. Langton, D. Singh, A. S. Wagh, M. Tlustochowicz, and K. Dwyer, Proc. 101st Ann. Mtg. of the American Ceramic Society, Indianapolis, April 25-28, 1999.
11. Erosion of magnesium potassium phosphate ceramic waste forms, K. C. Goretta, D. Singh, M. Tlustochowicz, M. M. Cuber, M. L. Burdt, S. Y. Jeong, T. L. Smith, A. S. Wagh, and J. L. Routbort, Materials Research Society Symposium Proc. 556, (1999), p. 1253-1260.43.
12. Demonstration of packaging of Fernald silo I waste in chemically bonded phosphate ceramic, A. S. Wagh, D. Singh, S. Y. Jeong, D. Graczyk, and L. B. TenKate, Paper presented at WM '99 in Session 6: Conditioning of Operational and Decommissioning Waste, Tucson, Feb. 28-March 4, 1999.
13. Development of zirconium/magnesium phosphate composites for immobilization of fission products, D. Singh, M. Tlustochowicz, and Arun S. Wagh, J. Amer. Ceram. Soc., 82[1] (1999), p. 43-49.
14. Modified phosphate ceramics for stabilization and solidification of salt mixed wastes, D. Singh, K. Patel, A. S. Wagh, and S.-Y. Jeong, Proc. Spectrum '98, Denver, Sept. 13-18 (1998), p. 553-560.
15. Stabilization and disposal of Argonne-West low-Level mixed wastes in Ceramicrete™ waste forms, D. Singh, D. Barber, A. S. Wagh, R. V. Strain, and M. Tlustochowicz, Proc. Waste Management '98 Conf., Tucson, March 1-5, 1998.
16. Mercury stabilization in chemically bonded phosphate ceramics, A. S. Wagh, S. Y. Jeong, and D. Singh, Ceramic Transactions, Vol. 87, Environmental Issues and Waste Management Technologies in the Ceramic and Nuclear Industries III, pp. 63-73 (1998).
17. CeramicreteTM radioactive waste forms – the new kid on the block, A. S. Wagh, D. Singh, Published in Radwaste Mag., Jan. 1998, p. 46-49.
18. Immobilization of fission products in phosphate ceramic waste forms, D. Singh, A. S. Wagh, Proc. Efficient Separations and Processing Cross-cutting Program '97 Technical Exchange Mtg., Gaithersburg, MD, Jan. 28-30, 1997, PNNL-SA-28461, pp. 1.17-1.
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21. CERAMICRETE stabilization of low-level mixed wastes - A complete story, A. S. Wagh, D. Singh, S. Y. Jeong, and R. V. Strain, Proc. 18th U.S. DOE Low-Level Radioactive Waste Management Conf., Salt Lake City, May 20-22, 1997; available on <http://www.inel.gov//resources/research//llrw>

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24. Immobilization of fission products in low-temperature ceramic waste forms, D. Singh, A. S. Wagh, M. Tlustochowicz, and V. Mandalika, Proc. Waste Management '97 Conf., Tucson, March 2-6, 1997; available on <http://www.wmsym.org/wm97proceedings/sess36/36%2D03.htm>.
25. Chemically bonded phosphate ceramics for stabilizing low-level radioactive wastes, S.-Y. Jeong, A. S. Wagh, and D. Singh, Ceramic Transactions, 72, Environmental Issues and Waste Management Technologies in the Ceramic and Nuclear Industries II, eds. V. Jain and D. K. Peeler, (1996) p. 179-188.
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29. Low-temperature-setting phosphate ceramics for low-level mixed waste stabilization, A. S. Wagh, A.S., D. Singh, D., International symposium and exhibition on Environmental Contamination in Central and Eastern Europe, Budapest (Hungary), Sep 1994, p. 23 -27.
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35. Mechanical properties of magnesium ammonium phosphate cements and their zeolite composites, A. S. Wagh, D. Singh, W. Subhan, N. Chawla, Cement-based materials: Present, future, and environmental aspects,Ceramic Transactions, 37, M. Moukwa, S. L. Sarkar, K. Luke, K., M. W. Grutzeck,(eds.), 95th annual meeting of the American Ceramic Society, Cincinnati, OH, 1993, p.18-22.
36. Chemically bonded phosphate ceramics - A Novel Class of Geopolymers, A. S. Wagh, Proceedings of the 106th Ann. Mtg. of the American Ceramic Society, Indianapolis, IN, April 18-21, 2004.
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